ALFONSO MARTINEZ ARIAS PhD

Department of Genetics, University of Cambridge, Cambridge CB2 3EH
ama11@hermes.cam.ac.uk

Current Post	Professor of Developmental Mechanics at the University of Cambridge
Date of Birth	14 September 1955
Place of birth	Madrid (Spain)
Nationality	Spanish
Telephone	+44 1223 766742 or 766595
Website	http://www.gen.cam.ac.uk/research-groups/martinez-arias http://amapress.gen.cam.ac.uk/

Education/Qualifications

- June 1983, PhD from the Dpt. of Biophysics and Theoretical Biology, The University of Chicago, Chicago (USA).
- July 1977, “Licenciado en Ciencias Biologicas”. Universidad Complutense. Madrid (Spain).

Professional History

- Since 2003 Professor of Developmental Mechanics. Department of Genetics, University of Cambridge
- January 2010-March 2011 Director of the Center for the Physics of Medicine of the University of Cambridge.
- October 2002-October 2003, Lecturer in Genetics at the University of Cambridge, Cambridge (UK) under a Wellcome Trust University Award Scheme
- 1987-2002, Wellcome Trust Senior Fellow in the Biomedical Sciences in the Department of Zoology and, from July 2000 in the Department of Genetics, University of Cambridge, Cambridge (UK).
- August 1986-August 1987, Staff of the MRC Laboratory of Molecular Biology, Cambridge (UK).
- 1983- 1986, postdoctoral research in the laboratory of Dr.P. Lawrence, MRC Laboratory of Molecular Biology, Cambridge (UK).
- 1979-1983, PhD work on the use of ß-galactosidase fusions to study gene expression in yeast, under the supervision of Dr. M. Casadaban. University of Chicago, Chicago (USA).
- 1976-1979, research studentship towards a “tesina” in the Dpt. Biochemistry under the supervision of A. Ribera, Universidad Complutense, Madrid (Spain).

Honours and Awards

- 2016 SRUK (Society of Spanish Researchers in the UK) Life achievent award
- 2015 Royal Society of Biology, undergraduate textbook Prize for the Fifth edition of “Principles of Development” Oxford University Press
- 2012 Waddington Medal of the British Society of Developmental Biology
- 2007 Elected member of EMBO
- 2003 Personal Chair (Professorship), University of Cambridge, Cambridge (UK).

- 2019 Advanced European Research Council Grant Award on “The mammaliam body plan blueprint, an in vitro approach”

- 2010 Human Science Frontier Grant (PI) on " Information processing by signal transduction and gene regulatory networks in mammalian development"
- 2009 Advanced European Research Council Grant Award on "Molecular origins and function of dynamic heterogeneities in mouse ES cells and pre-implantation embryos"
- 1987-2002 Wellcome Trust Senior Fellowship, held at the University of Cambridge.
- 1983-1986, Long term EMBO Postdoctoral Fellowship at the MRC Laboratory of Molecular Biology, Cambridge (UK).
- 1978-1979 Fullbright Scholarship to attend the University of Chicago, Chicago (USA)
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Other appointments and affiliations

- 2019- Advisory Board of The Hubrecht Institute, Utrecht (the Netherlands)
- 2019-2024 Advisory Board of Centro Andaluz de Biologia del Desarrollo, Sevilla (Spain)
- 2012-2017 Board of directors of the International Society of Differentiation
- 2003- 2005 Consultant/ Assessor for the Programme of Cell and Developmental Biology of the Center for Genomic Regulation (CRG), Barcelona (Spain)
- 1998 and 2002 Member of the review panel for the University of the Mediterranean (France).
- 2000-2005 Member of the Board of the British Society for Developmental Biology (BSDB).
- Since 2003 member of the Faculty 1000 (BiomedNet)
- Regular reviewer of manuscripts for Nature, Science, Development, Journal of Cell Science, Developmental Biology, Mechanisms of Development and PLoS journals

- 2019 (May-September) Visiting Professor at Department of Life Sciences EPFL Lausanne (Switzerland) during sabbatical year.
- 2019 (March) Visiting Professor at Harvard Systems Biology in Harvard Medical School, Boston (USA) during sabbatical year.
- 2019 (January/February) Maria de Maeztu Visiting Professor at the Universidad Pompeu Fabra, Barcelona (Spain) during sabbatical year.
- 1999 Invited Professor at the Ecole Normale Superieur, Paris (France)

Social Media

Blog: http://amapress.gen.cam.ac.uk/?page_id=848
Twitter: @AMartinezArias

Interests

The role of cell signalling in animal development and the physical and engineering principles of living matter.

PATENTS

1. POLARISED THREE-DIMENSIONAL CELLULAR AGGREGATES PCT/GB2019/052668
2. HUMAN POLARISED THREE-DIMENSIONAL CELLULAR AGGREGATES PCT/GB2019/052670

Extramural activities

Invited named lectures

I give regular invited lectures at Universities and meetings in Europe and the US, but on occasion have been invited to give special or named lectures detailed below:

2020 Keynote at Belgian Society of Cell and Developmental Biology (Ghent, Belgium)
2020 Keynote at Societe Francais de Biologie du Dévelopement (Cassis, France)
2020 Keynote at 11th World Congress on Alternatives and Animal Use in the Life Sciences (Maastricht, Belgium)
2020 Keynote speaker at 5th International Conference on Alternatives for Developmental Neurotoxicity Testing (Konstanz, Germany)
2019 Keynote lecture at Institut Curie Developmental Biology Course, Paris (France)
2018 Keynote at StratGen conference, Stockholm (Sweden)
2017 Keynote in Medicine by Design, University of Toronto, Toronto (Canada)
2015 Keynote at Plurimes summer workshop in Cascais (Portugal)
2015 Keynote at EMBO Young Scientists Forum Warsaw (Poland)
2014 Plenary lecture at kickoff of "Wntsapp" EU training network, Utrecht (The Netherlands)
2014 Plenary lecture at "Responsible Research meeting" LMU, Munich (Germany)
2013 Plenary lecture at the NIMR/UCL graduate student retreat
2012 Guest lecturer to the 43rd Princess Takamatsu Cancer Symposium in Tokyo (Japan)
2012 Opening Ludwig von Bertalanffy lecturer at the Center for Organismal Biology, University of Heidelberg, Heidelberg (Germany)
2011 Keynote speaker at the 1st YEDI (Young European Drosophila Investigator) meeting at Leyzen (Switzerland).
2010 Keynote speaker at the 5th International meeting of the Latin American Society for Developmental Biology in Santa Cruz (Chile).
2009 Plenary speaker at the 15th Regional Drosophila meeting in Muenster (Germany).
2009 Plenary speaker at the Institute Molecular Medicine PhD student meeting. Lisboa (Portugal)
2008 Guest speaker at the Theory lunch, Harvard Systems Biology, Boston (USA)
2008 Keynote speaker at EMBO conference on "Molecular and Cellular Mechanisms Regulating Skeletal Muscle Development and Regeneration", San Feliu de Guixols (Spain)
2007 Keynote speaker at the the retirement party of Dr. Juan Modolell in Madrid (Spain)
2006 Plenary lecture at the 44th chilean Congress of Cell Biology in Pucon (Chile)
2006 Inaugural lecture at the Developmental Biology Course of the Universidad Catolica of Santiago, Santiago (Chile).
2002 Keynote speaker at the annual Symposium of the Gulbenkian PhD programme. Curia (Portugal).
1999 Series of lectures on Developmental Genetics as Invited Professor at the Ecole Normale Superieur, Paris (France).
1999, 2000, Series of Lectures on "Genetics and Embryology at the turn of the Century" at the Summer School of the University of Cambridge.

Meeting and course organization

2016-2018 Annual Symposium on "Engineering Self Organization in Multicellular Systems" (Together with Peter Zandstra, Matthias Lutolf and Shahragim Tajbakhsh; 2016 at Pasteur Institute, 2017 EPFL, Lausanne, Switzerland and 2018, Cambridge, UK)
2006-2017 Annual symposia on The Physics of Living Matter (PLM1-6 and PLM8-12) in Cambridge (UK), PLM7 in UCL, London (UK).
2010 Company of biologists workshop on "Stochasticity in cell and developmental processes". Windsor (UK).
2009 Symposium "Noise in Life". Cambridge (UK)
2008 Meeting on "Dynamic heterogeneities in development". Cambridge (UK)
2007 BSDB autumn meetin on "Systems approaches to development". Sheffield (UK)
2006 EMBO course on "Molecular mechanisms of Development". Barcelona (Spain)
2005 British Society for Developmental Biology Symposium. Warwick (UK)

2005 Developmental Biology Course Gulbenkian PhD programme. Lisbon (Portugal)
2004 Founding Annual Symposium of the Center for Genomic Regulation on “The cell in development”. Barcelona (Spain)
2003 Joint meeting of the french and british societies of developmental Biology. Nice (France)
1998 Fundacion Juan March meeting on “Notch-Lin-12 signalling”. Madrid (Spain)
1993 Spring meeting of the BSDB. Norwich (UK)
1992 Banbury center meeting on “Frontiers in Developmental Biology”. Cold Spring Harbour (USA)
1991 Fundacion Juan March meeting on “Cell interactions in development”. Madrid (Spain)

List of publications

Books

Wolpert, L., Tickle, C. and Martinez Arias, A. Principles of Development 5th edition (2015) and 6th edition (2019). Oxford University Press

Martinez Arias, A. and Stewart, A. (2002) Molecular principles of animal development. Oxford University Press.

Bate, M. and Martinez Arias, A. Editors (1993) The development of Drosophila melanogaster. Cold Spring Harbor Press.

Peered Reviewed

162. Moris, N., Anlas, K., van den Brink, S., Alemany, A., Schroeder, J., Gimire, S., Balayo, T., Oudenaarden, A. and Martinez Arias, A. (2020) An embryonic stem cell-based model for early human development. Nature In press.

161. van den Brink, S., Alemany, A., van Batenburg, V. Moris, N., Anlas, K., Blotenburg, M., Turner, D., Vivié, J., Martinez Arias, A. and Oudenaarden, A. (2020) Comparative single-cell and spatial transcriptomics between gastruloids and embryos reveals axial somitogenesis in vitro Nature In press

160. Levin, M. and Martinez Arias, A. (2019) Reverse-engineering growth and form in Heidelberg. Development 146, pii: dev177261. doi: 10.1242/dev.177261.

159. Edri, S., Hayward, P. Jawaid, W. and Martinez Arias, A. (2019) NeuroMesodermal Progenitors (NMPs): a comparative study between Pluripotent Stem Cells and Embryo derived populations. Development 146, doi: 10.1242/dev.180190

158. Edri, S., Hayward, P., Baillie-Johnson, P., Steventon, B. and Martinez Arias, A. (2019) An Epiblast Stem Cell derived multipotent progenitor population for axial extension. Development. doi: 10.1242/dev.168187.

157. Rivron, N., Pera, M., Rossant, J., Martinez Arias, A., Zerniclka-Goetz, M., Fu, J., van den Brink, S., Bredenoord, A., Dondorp, W., de Wert, G., Hyun, I., Munsie, M. and Isasi, R. (2018) Debate ethics of embryo models from stem cells. Nature 564, 183-185.

156. Beccari, L., Moris, N., Girgin, M., Turner, D., Baillie-Johnson, P., Cossy, A.C., Lutolf, M., Duboule, D. and Martinez Arias, A. (2018) Multiaxial self organization properties of mouse embryonic stem cells gastruloids. Nature 562, 272-276.

155. Martinez Arias, A. and Lutolf, M. (2018) Mammalian body plan engineering: lessons and challenges. Curr. Ops. In Systems Biol. I. 11, 50-56.

154. Morgani, S., Saiz, N., Garg, V., Raina, D., Kang, M., Martinez Arias, A., Nichols, J., Schroeter, C. and Hadjantonakis, AK. (2018) A Sprouty 4 reporter to monitor FGF/ERK signalling activity in ESCs and mice Developmental Biology 441, 104-126.

153. Martinez Arias, A. and Steventon B. (2018) On the nature and function of organizers. Development 145: dev159525 doi: 10.1242/dev.159525

152. Huch, M., Knoblich, J., Lutolf, M. and Martinez Arias, A. (2017) The hype and hope of organoids. Development 144, 938-941

151. Moris, N. and Martinez Arias, A. (2017) The hidden memory of differentiating cells. Cell Syst. 27, 163-164

150. Turner DA, Girgin M, Alonso-Crisostomo L, Trivedi V, Baillie-Johnson P[3], Glodowski CR, Hayward PC, Collignon J, Gustavsen C, Serup P, Steventon B, P Lutolf M, Martinez Arias A. (2017) Anteroposterior polarity and elongation in the absence of extra-embryonic tissues and of spatially localised signalling in gastruloids: mammalian embryonic organoids. Development 144, 3894-3906.

149. Steventon, B. and Martinez Arias, A. (2017) Evo-engineering and the Cellular and Molecular Origins of the Vertebrate Spinal Cord. Dev Biol. 432, 3-13

148. Moris, N., Pina, C., and Martinez Arias, A. (2016) Transition states and cell fate decisions in epigenetic landscapes. Nature Rev. Genetics. 17, 693-703

147. Hadjantonakis AK and Martinez Arias, A (2016) Single-Cell Approaches: Pandora's Box of Developmental Mechanisms.Dev Cell 38, 574-578.

146. Malleshaiah, M., Padi, M., Rué, P., Quackenbush, J., Martinez-Arias, A. and Gunawardena, J. (2016) Nac1 coordinates a dub-network of pluripotency factors to regulate embryonic stem cell differentiation. Cell Reports 14, 1181-1194..

145 Turner, D., Baillie-Johnson, P. and Martinez Arias, A. (2016) Organoids and the genetically-encoded self-assembly of embryonic stem cells. Bioessays 38, 181-191.

144. Christophorou, A., Mulvey, C., Breckels, L.M., Geladaki, A., Hurrell, T., Hayward, P., Naake, T., Gatto, L., Viner, R., Martinez Arias, A. and Lilley, K.S. (2016) A draft map of the mouse pluripotent stem cell spatial proteome. Nature Comm. 7, 9992 doi: 10.1038/ncomms9992.

143. Baillie Johnson, P., van den Brink, S., Balayo, T., Turner, D. and Martinez Arias, A. (2015) Generation of mouse aggregates of embryonic stem cells that show symmetry breaking, polarization and emergent collective behavior. JOVE Issue 105; doi: 10.3791/53252

142. Machado, P., Duque, J., Etienne, J., Martinez Arias, A., Blanchard, G. and Gorfinkiel, N. (2015) Emergent material properties of epithelial tissues. BMC Biology 13 98. doi: 10.1186/s12915-015-0200-y.

141. Munoz Descalzo, S., Hadjantonakis, AK. And Martinez Arias (2015) Wnt/ß-catenin signalling and the dynamics of fate decisions in early mouse embryos and embryonic stem (ES) cells. Seminars in Cell and Dev. Biol. 47-48, 101-109.

140. Schroeter, C., Rue, P. MacKenzie, J. and Martinez Arias (2015) FGF/MAPK signaling sets the switching threshold of a bistable circuit controlling cell fate decisions in ES cells Development 142, 4205-4216.

139. Freyer, L., Schroeter, C., Saiz, N. Schrode, N., Nowotschin, S., Martinez Arias, A. and Hadjantonakis, AK. (2015) A loss of function and H2B-Venus transcriptional reporter allele for Gata6 mice. 15, 38 doi: 10.1186/s12861-015-0086-5.

138. Chatterjee, S., Sai, A., Gocha, T., Murphy, M. Gonsalves, F.,, Zhang, X., Hayward, P., Oksuz, B., Shen, S., Madar, A., Martinez Arias, A. and DasGupta, R. (2015) Inhibition of β-catenin-TCF1 interaction delays differentiation of mouse embryonic stem cells. J. Cell Biol. 211, 39-51.

137. Mulvey CM, Schröter C, Gatto L, Dikicioglu D, Fidaner IB, Christoforou A, Deery MJ, Cho LT, Niakan KK, Martinez-Arias A, Lilley KS. (2015) Dynamic Proteomic Profiling of Extra-Embryonic Endoderm Differentiation in Mouse Embryonic Stem Cells. 33, 2712-2725.

136. Rue, P and Martinez Arias, A. (2015) Cell dynamics and gene expression control in tissue homeostasis and development. Mol. Sys. Biol. 11:792. doi: 10.15252/msb.20145549.

135. van den Brink, S., Baillie-Johnson, P., Balayo, T., Hadjantonakis, AK., Nowotschin, S., Turner, DA. And & Martinez Arias, A. (2014) Symmetry breaking, germ layer specification and axial organisation in aggregates of mouse ES cells. Development 141, 4231-4242.

134. Turner, DT., Hayward, P., Baillie Johnson, P., Broome, R., Rue, P., Faunes, F. and Martinez Arias, A. (2014) Wnt/ß-catenin and FGF signalling direct the specification and maintenance of a neuromesodermal axial progenitor in ensembles of mouse ES cells. Development 141, 4242-4253.

133. Christoforou A[1], Martinez Arias A, Lilley KS. (2014) Determining Protein Subcellular Localization in Mammalian Cell Culture with Biochemical Fractionation and iTRAQ 8-Plex Quantification. Methods Mol Biol. 1156:157-174.

132. Fischer SC, Blanchard GB, Duque J, Adams RJ, Arias AM, Guest SD, Gorfinkiel N. (2014) Contractile and mechanical properties of epithelia with perturbed actomyosin dynamics. PLoS One. Apr 23;9(4):e95695. doi: 10.1371/journal.pone.0095695.

131. Turner, DT., Trott, J., Hayward, P. Rue, P and Martinez Arias, A. (2014) An interplay between extracellular signalling and the dynamics of the exit from pluripotency drives cell fate decisions in mouse ES cells. Biology Open 3, 614-626.

130. Turner, DT., MacKenzie, J., Davies, E. and Martinez Arias, A. (2013) Brachyury cooperates with Wnt/ß-Catenin signalling to specify individual cell velocities during Primitive Streak differentiation of mouse ES cells. BMC Biology 13, 63 doi:10.1186/s12915-014-0063-7

129. Trott, J. and Martinez Arias, A. (2013) Single cell lineage analysis of the exit of pluripotency in mouse Embryonic Stem cells. Biology Open 2:1049-56. doi: 10.1242/bio.20135934.

128. Muñoz-Descalzo, S., Rue, P., Faunes, F., Hayward, P., Jakt, L.M., Balayo, C., Garcia Ojalvo, J. and Martinez Arias, A. (2013) A competitive protein interaction network buffers Oct4-mediated differentiation to promote pluripotency in embryonic stem cells. Mol. Sys. Biol. 9:694. doi: 10.1038/msb.2013.49.

127. Martinez Arias, A., Nichols, J. and Schroeter, C. (2013) A molecular basis for developmental plasticity of early mammalian embryos. Development 140, 3499-3510.

126. Faunes, F., Hayward, P., Muñoz Descalzo, S., Chaterjee, S., Balayo, T., Trott, J., Ferrer-Vaquer, A., Hadjantonakis, AK., Dasgupta, R. and Martinez Arias, A. (2013) A membrane associated ß-catenin/Oct4 complex is associated with ground state pluripotency in mouse Embryonic Stem Cells. Development 140, 1171-1183.

125. Klein, T., Schneider, M., Troost, T., Grawe, F. and Martinez-Arias, A. (2012) Activation of Notch in lgd mutant cells requires the fusion of late endosomes with the lysosome. J Cell Science. 126, 645-656.

124. Chalut KJ, Höpfler M, Lautenschläger F, Boyde L, Chan CJ, Ekpenyong A, Martinez-Arias A, Guck J (2012) Chromatin decondensation and nuclear softening accompany Nanog downregulation in embryonic stem cells. Biophysical J. 103, 2060-2070.

123. Garcia Ojalvo, J. and Martinez Arias, A. (2012) Towards a statistical mechanics of cell fate decisions. Curr Op. in Genet. and Dev. 22, 1-8.

122. Luo, Y. Lim, C., Nichols, J., Martinez Arias, A., and Wernisch, L. (2012) Cell signalling regulates potential landscapes in ES cell populations. Roy. Soc Interface. vol. 10 no. 78 20120525

121. Muñoz Descalzo, S., Rue, P., Garcia Ojalvo, J. and Martinez Arias, A. (2012) Correlations between the levels of Oct4 and Nanog as a signature for naïve pluripotency in mouse ES cells. Stem Cells 30, 2683-2691.

120. Chalancon G, Ravarani CN, Balaji S, Martinez-Arias A, Aravind L, Jothi R, Babu MM. (2012) Interplay between gene expression noise and regulatory network architecture. Trends in Genet. 28, 221-232.

119. de Navascues, J., Perdigoto, C., Bardin, A., Martinez Arias, A. and Simons, B. (2012) *Drosophila* midgut homeostasis results from neutral competition between symmetrically dividing intestinal stem cells. EMBO J. 31:2473-2485.

118. Lada, K. Gorfinkiel, N. and Martinez Arias, A. (2012) Interactions between the amnioserosa and the epidermis revealed by the function of the ushaped gene. Biology Open. 1, 353-361.

117. Muñoz Descalzo, S. and Martinez Arias, A. (2012). The structure of Wntch signalling and the resolution of transition states in development. Seminars in Cell and Dev Biol. 23, 443-449.

116. Muñoz Descalzo, S., de Navascues, J and Martinez Arias, A. (2012) Wnt/Noch signaling: an integrated mechanism regulating transitions between cell states. Bioessays 34, 110-118.

114. Trott, J., Hayashi, K., Surani, A., Babu, M. and Martinez Arias, A. (2012) Dissecting ensemble networks in ES cell populations reveals micro-heterogeneity underlying pluripotency. Molecular Biosystems 8, 744-752.

113. Mateus, A. and Martinez Arias, A. (2011) Patterned cell adhesion associated with tissue deformations during Dorsal Closure in *Drosophila*. PLoS One 6(11):e27159.

112. Abdel-Rahman, N., Martinez Arias, A. and Blundell, T. (2011) Probing the Druggability of Protein-Protein Interactions: Targeting Notch1 Receptor Ankyrin Domain Using a Fragment-based Approach Biochemical Soc. Trans. 39, 1327-1333.

111. Martinez Arias, A. and Brickman, J. (2011) Gene expression heterogeneities in embryonic stem cell populations: origin and function. Curr.Op. in Cell Biology 23, 650-656

110. Muñoz Descalzo, S., Tkocz, K., Balayo, T and Martinez Arias, A. (2011) Modulation of the ligand independent traffic of Notch by Axin and APC contributes to the activation of Armadillo/ß-catenin in *Drosophila.* Development 138, 1501-1506.

109. Mateus, A., Gorfinkiel, N. Schamberg, S and Martinez Arias, A. (2011) Endocytic and recycling endosomes modulate cell shape changes and tissue behaviour during morphogenesis. PLoS One. 2011 Apr 14;6(4):e18729.

108. Muñoz Descalzo, S., Sanders, P., Montagne, C., Johnson, R., Balayo, C. and Martinez Arias, A. (2010) Wingless modulates the ligand independent traffic of Notch through Dishevelled. Fly 4, 182 – 193.

107. Blanchard, G., Murugesu, S., Adams, R. Martinez Arias, A. and Gorfinkiel, N. (2010) Cytoskeletal dynamics and supra-cellular organization of cell shape fluctuations during dorsal closure. Development 137, 2743-2752.

106. Becam, I., Fiuza, U., Martinez Arias, A. and Milan, M. (2010) A role for receptor Notch in ligand cis inhibition in Drosophila. Curr. Biol. 20, 554-560.

105. Fiuza, U., ,Klein, T., Martinez Arias, A. and Hayward, P. (2009) Mechanisms of ligand-mediated inhibition in Notch signalling activity in *Drosophila*. Dev. Dyn 239, 798-805.

104. Ehebauer, M. and Martinez Arias, A. (2010) The structural and functional determinants of

the Axin and Dishevelled DIX domains. BMC Structural Biology Nov 12;9:70.

103. Mateus, AM, Gorfinkiel, N. and Martinez Arias, A. (2009) Origin and function of fluctuations in cell behaviour and the emergence of pattern. Semin Cell Dev Biol. 20, 877-884.

102. Sanders, PG, Muñoz-Descalzo, S., Balayo, T., Wirtz, F., Hayward, P. and Martinez Arias A. (2009) Ligand independent traffic of Notch buffers the activity of Armadillo in Drosophila. PLoS Biol 7(8): e1000169. doi:10.1371/journal.pbio.1000169

101. Gorfinkiel, N., Blanchard, G., Adams, R. and Martinez Arias, A. (2009) Mechanical constraints pattern cellular behaviour during Dorsal Closure in Drosophila. Development 136, 1889-1898.

100. Kalmar, T., Lim, C., Hayward, P., Muñoz Descalzo, S., Garcia Ojalvo, J. and Martinez Arias, A. (2009) Regulated fluctuations in Nanog expression mediate cell fate decisions in embryonic stem cells. PLoS Biol 7(7): e1000149. doi:10.1371/journal.pbio.1000149

99. Tan, D., Dvinge, H.,Christophorou, A., Bertone, P., Martinez Arias, A. and Lilley, K. (2009) Mapping organelle proteins and protein complexes in *Drosophila*. J Proteom Res. 8, 2667-2678.

98. Jaeger, J. and Martinez Arias, A. (2009) Getting the measure of positional information. PLoS Biology Mar 31;7(3):e81.

97. Carreira Barbosa, Kajita, M., F., Morel, V., Wada, H., Adams, R., Okamoto, H.,., Martinez Arias, A. , Fujita, Y. , Wilson, S and Tada, M. (2009) Flamingo regulates epiboly and convergence/extension movements through cell cohesive and signalling functions during zebrafish gastrulation Development 136, 383-392.

96. Eid, JP., Martinez Arias, A., Robertson, H., Hime, GR. And Dziadek, M. (2008) The Drosophila STIM1 orthologue has roles in cell fate specification and tissue patterning. BMC Dev Biol. 8, 104.

95. Somorjai, I. and Martinez Arias, A. (2008) Wingless Signalling Alters the Levels, Subcellular Distribution and Dynamics of Armadillo and E-Cadherin in Third Instar Larval Wing Imaginal Discs. PLoS ONE 3(8):e2893.

*94. Hayward, P., Kalmar, T. and Martinez Arias, A. (2008) Wnt/Notch signalling and information processing during development Development 135, 411-424.

93. Garcia Fernandez, B., Martinez Arias, A. and Jacinto, A. (2007) Dpp signalling orchestrates dorsal closure by regulating cell shape changes both in the amnioserosa and in the epidermis. Mech, of Dev. 124, 884-897.

92. Fiuza, U. and Martinez Arias, A. (2007) Cell and molecular biology of Notch. J. Endocrynology 194, 459-474.

91. Gorfinkiel, N. and Martinez Arias, A. (2007) Requirements for adherens junction components for the interaction between epithelial tissues during dorsal closure in Drosophila. J. Cell Sci. 120, 3289-3298

90. Martinez Arias, A. (2006) Drosophila melanogaster and the development of Biology in the XX Century. In “Methods of Drosophila cell Biology”. C. Dahmann editor. Humana Press.

89. Ehebauer, M., Hayward, P. and Martinez Arias, A. (2006) Notch signaling pathway. Science’s STKE (Connections map) (http://stke.sciencemag.org/cgi/cm/stkecm;CMP_19043)

88. Ehebauer, M., Hayward, P. and Martinez Arias, A. (2006). Notch, a universal arbiter of cell fate decisions. Science 314, 1414-1415.

87. Tan, D. and Martinez Arias, A. (2006) High-Throughput Localization of Organelle Proteins by Mass Spectrometry: a quantum leap for cell biology Bioessays 28, 780-784.

86. Hayward, P., Balayo, T. and Martinez Arias, A. (2006) Notch synergizes with Axin to regulate the activity of Armadillo in *Drosophila*. Dev. Dyn. 235, 2656-2666.

85. Martinez Arias, A. and Hayward, P. (2006) Filtering transcriptional noise during development: concepts and mechanisms. Nature Reviews Genetics 7, 34-44.

84. Langdon, T., Hayward, P., Sanders, P., Brennan, K., Wirtz-Peutz, F., Balayo, C. and Martinez Arias, A. (2006) The Notch receptor encodes at least two structurally separable different functions in *Drosophila*. A genetic analysis. Dev. Dyn. 235, 998-1013.

83. Martinez Arias, A. (2005) Cell signaling. Frizzled at the cutting edge of the synapse. Science 310, 1284-1285.

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*81. Hayward, P., Brennan, K activity., Sanders, P., Balayo, T. DasGupta, R., Perrimon, N. and Martinez Arias, A. (2005) Notch modulates Wnt signalling by associating with Armadilloß-catenin and regulating its transcriptional. Development 132, 1819-1830.

80. Morel, V. and Martinez Arias, A. (2004) Armadillo/ß-catenin dependent Wnt signalling is required for the polarisation of epidermal cells during dorsal closure in *Drosophila*. Development 131, 3273-3283.

79. Martinez Arias, A. and Knust, E. (2003) Building and engineering organisms: the cellular interface. Mechanisms of Development 120, 1213-1216.

78. Martinez Arias, A. (2003) Wnts as morphogens? The view from the wing of *Drosophila*. Nature reviews in Molecular Cell Biology 4, 321-325.

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76. Martinez Arias, A., Zecchini, V. and Brennan, K. (2002) CSL-independent Notch signalling: a checkpoint in cell fate decisions during development? Curr. Op. In Genet. and Dev. 12, 524-533.

75. Kaltschmidt, J. and Martinez Arias, A. (2002) A new dawn for an old connection: development meets the cell. Trends in Cell Biol. 12, 316-320.

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73. Martinez Arias, A. (2002) New alleles of Notch draw a blueprint for multifunctionality. Trends in Genet.18, 168-170.

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